

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 Claim 1 (previously presented): A communications method, the  
2 method comprising:  
3       operating an access node to receive a data message directed  
4 to an end node; and  
5       operating the access node to determine a paging requirement  
6 using packet classification based on a header field included in  
7 said data message.

1 Claim 2 (previously presented): The method of claim 1,  
2       wherein said paging requirement is determined as a function  
3 of at least one of a quality of service indicator, a type  
4 indicator, a source indicator, and a destination indicator; and  
5       wherein said access node is a base station, the method  
6 further comprising:  
7       operating said access node to allocate a paging  
8 transmission resource for transmitting a page as a function of  
9 the determined paging requirement, at least some of said  
10 plurality of paging requests having different determined paging  
11 requirements resulting in different allocation of access node  
12 resources.

1 Claim 3 (previously presented): The method of claim 2, further  
2 comprising:  
3       operating said access node to transmit a page over a  
4 wireless communications link using the allocated paging  
5 transmission resource.

1 Claim 4 (currently amended): The method of claim 3, wherein  
2 said step of transmitting a page includes incorporating, into  
3 said page, information indicating a state of device operation,

4 in which a device to which said page is directed, is to operate  
5 after receiving said page.

1 Claim 5 (previously presented): The method of claim 2, further  
2 comprising:

3 operating said access node to communicate a paging signal  
4 to a second node, indicating allocation of a paging transmission  
5 resource for use in transmitting a page corresponding to said  
6 received data message.

1 Claim 6 (previously presented): The method of claim 1, further  
2 comprising:

3 operating said access node to communicate said determined  
4 paging requirement to a second node in a paging request message.

1 Claim 7 (currently amended): The method of claim 6, wherein  
2 said page paging request message includes at least a portion of  
3 said received data message.

1 Claim 8 (original): The method of claim 7, wherein said  
2 determined paging requirement, indicated in said paging request  
3 message, is that said portion be included in a page.

1 Claim 9 (original): The method of claim 6, wherein said  
2 determined paging requirement, indicated in said paging request  
3 message, is that a page be acknowledged.

1 Claim 10 (original): The method of claim 6, wherein said  
2 determined paging requirement, indicated in said paging request  
3 message, is a quality of service.

1 Claim 11 (original): The method of claim 10, wherein said  
2 quality of service includes a page transmission timing  
3 constraint.

1 Claim 12 (original): The method of claim 10, wherein said  
2 quality of service is one of a plurality of levels.

1 Claim 13 (original): The method of claim 10, wherein said  
2 quality of service requires that a page be transmitted multiple  
3 times.

1 Claim 14 (original): The method of claim 10, wherein said  
2 quality of service requires retransmission of a page at least  
3 once in the absence of an acknowledgment.

1 Claim 15 (currently amended): The method of claim 14, further  
2 comprising:  
3       operating the second node to cause said ~~re-transmission~~  
4 retransmission of said page to be into a geographic area larger  
5 than an initial transmission area of said page.

1 Claim 16 (currently amended): The method of claim 6,  
2       wherein said determined paging requirement, indicated in  
3 said paging request message, is a quality of service level; and  
4       wherein said ~~page~~ paging request message includes paging  
5 resource allocation information indicating a fraction of a  
6 paging resource to be allocated by said second node to pages  
7 having said quality of service level, the method further  
8 comprising:  
9       operating the second node to allocate said fraction of said  
10 paging resource to pages having a quality of service level  
11 indicated in said paging request message.

1 Claim 17 (original): The method of claim 6, further comprising:  
2       operating said second node to allocate a paging  
3 transmission resource for transmitting a page, as a function of  
4 said determined paging requirement, indicated in said paging  
5 request message.

1 Claim 18 (original): The method of claim 17, further  
2 comprising:  
3 operating said second node to transmit a page using the  
4 allocated paging transmission resource.

1 Claim 19 (previously presented): The method of claim 17,  
2 further comprising:  
3 operating said second node to communicate a paging signal  
4 to a third node, indicating allocation of a paging transmission  
5 resource for use in transmitting a page corresponding to said  
6 data message.

Claims 20-26 (canceled)

1 Claim 27 (previously presented): A communications system  
2 comprising:  
3 a base station including:  
4 i) means for receiving a data message directed to an end node;  
5 and  
6 ii) means for determining a paging requirement using packet  
7 classification based on a header field included in said data  
8 message, said paging requirement being determined as a function  
9 of at least one of a quality of service indicator, a type  
10 indicator, a source indicator, and a destination indicator.

1 Claim 28 (previously presented): The system of claim 27,  
2 wherein said base station, further comprises:  
3 means for allocating a paging transmission resource for  
4 transmitting a page as a function of a determined paging  
5 requirement.

1 Claim 29 (previously presented): The system of claim 28,  
2 wherein said base station further includes a radio transmitter

3 for transmitting a page using the allocated paging transmission  
4 resource.

1 Claim 30 (previously presented): The system of claim 29,  
2 wherein said base station further includes:  
3 means for generating a paging request message including  
4 information indicating said determined paging requirement; and  
5 means for transmitting said paging request message to  
6 another node.

1 Claim 31 (currently amended): The system of claim 30, wherein  
2 said page paging request message includes at least a portion of  
3 said received data message and wherein said determined paging  
4 requirement, indicated in said paging request message, is that  
5 said portion be included in a page.

1 Claim 32 (original): The system of claim 30, wherein said  
2 determined paging requirement, indicated in said paging request  
3 message, is that a page be acknowledged.

1 Claim 33 (original): The system of claim 30, wherein said  
2 determined paging requirement, indicated in said paging request  
3 message, is a quality of service requirement.

1 Claim 34 (original): The system of claim 30, further  
2 comprising:  
3 a second node, said second node including:  
4 i) means for receiving said paging request message;  
5 ii) means for allocating at least one paging resource as a  
6 function of paging requirement information included in a  
7 received paging request message; and  
8 iii) means for transmitting a page to a mobile node using  
9 the at least one allocated paging resource.

1 Claim 35 (previously presented): A communications method, the  
2 method comprising:  
3 servicing a plurality of different paging requests by  
4 allocating different amounts of a paging transmission resource  
5 to different paging requests, said paging transmission resource  
6 being one of transmission power, bandwidth, frequency, and  
7 transmission time slots; and  
8 transmitting a page corresponding to one of said plurality  
9 of different paging requests over a wireless communication link  
10 using the amount of said paging transmission resource allocated  
11 to said one of said plurality of different paging requests.

1 Claim 36 (previously presented): The method of claim 35,  
2 wherein said servicing and transmitting steps are performed by a  
3 base station.

1 Claim 37 (previously presented): The method of claim 35,  
2 wherein said paging transmission resource is bandwidth.

1 Claim 38 (previously presented): The method of claim 35,  
2 wherein said paging transmission resource is frequency.

1 Claim 39 (currently amended): The method of claim 35, wherein  
2 said paging transmission resource is ~~timeslots~~ time slots.

1 Claim 40 (previously presented): The method of claim 35,  
2 wherein said paging transmission resource is transmission power.

1 Claim 41 (previously presented): The method of claim 35,  
2 wherein allocating different amounts of a paging transmission  
3 resource includes allocating a minimum fraction of paging  
4 channel capacity to a group of paging requests having a common  
5 quality of service indicator.

1 Claim 42 (previously presented): A method of operating an  
2 access node, the method comprising:  
3 allocating a minimum fraction of paging channel capacity to  
4 a group of paging requests having a common quality of service  
5 indicator; and  
6 transmitting a page corresponding to one of the paging  
7 requests in said group over a wireless communication link.

1 Claim 43 (previously presented): A method of operating an access  
2 node, the method comprising:  
3 determining an ordering in which pages corresponding to a  
4 plurality of paging requests are transmitted based on a time  
5 constraint requirement associated with one of said plurality of  
6 paging requests; and  
7 transmitting a page corresponding to said one of the paging  
8 requests over a wireless communications link.

1 Claim 44 (previously presented): The method of claim 43, wherein  
2 said time constraint requirement is a maximum latency.

1 Claim 45 (previously presented): The method of claim 43,  
2 wherein said step of transmitting a page includes transmitting  
3 said page corresponding to said one of the paging requests prior  
4 to transmitting a page corresponding to a previously received  
5 paging request.